

What is claimed is:

1. Apparatus for determining normal operating variables for an unknown compressed air system installed on a motor vehicle, including a compressor and a governor providing cut-in and cut-out of the compressor, the apparatus comprising:

an air pressure sensor located in communication with the compressed air system for sensing air pressure and generating an air pressure signal;

a source of a clock signal; and

an information processor connected to receive the air pressure signal and utilizing the clock signal which is programmed to determine variation in air pressure over time, and to determine cut-in and cut-out pressure from detected major deflection points in the air pressure readings.

2. Apparatus as set forth in claim 1, further comprising:

the information processor being further programmed to determine use times between minimum major deflection points and maximum major deflection points, excluding periods where pressure falls below the measured value of a negative turning minor deflection point.

3. Apparatus as set forth in claim 2, further comprising:

means for averaging recent deflection point pressure readings, as indicators of a compressor cut-in and cut-out pressure.

4. A method of characterizing a compressed air system for a motor vehicle comprising the steps of:

obtaining air pressure readings from an air pressure sensor located in communication with the air compression system;

- determining major air pressure change deflection points;
  - utilizing recently determined major air pressure deflection points to determine expected air compressor cut-in and cut-out points;
  - calculating the pressure rise time between major deflection points bounding a minimum deflection point and a subsequent maximum deflection point and excluding intervening periods where pressure is below a level of a negative turning minor deflection point; and
  - determining a rise slope from the calculated pressure rise time.
5. The computer executable algorithm of claim 4, wherein the step of utilizing recently determined major air pressure deflection points involves averaging the most recently determined major air pressure deflection points.